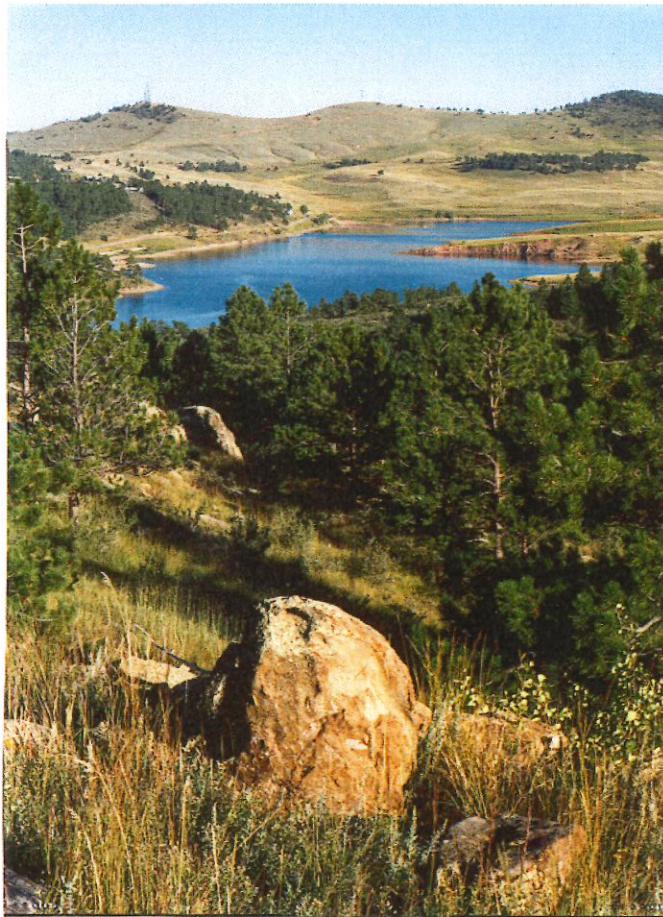

**SUPPLEMENTAL RESOURCE MANAGEMENT PLAN
FOR PINWOOD RESERVOIR:**

RAMSAY-SHOCKEY OPEN SPACE



David Clack Colorado Photographics 1999

Larimer County Parks and Open Lands
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1. INTRODUCTION

1.1 Purpose and Objectives of the Plan

Larimer County Parks and Open Lands acquired 177 acres adjacent to Pinewood Reservoir, a regional park managed by the County, in order to buffer the reservoir and to provide additional public recreation. In 1999, Mr. Bob Ramsay donated funds to reimburse the County for acquisition of this property and to fund park improvements and facilities on the property. This donation was made in honor of his wife, Mary Kathryn Ramsay, her mother, Florence Shockey, and her brother, Phil Shockey. Consequently, this addition to Pinewood Reservoir regional park is referred to as the Ramsay-Shockey Open Space.

The Ramsay-Shockey Open Space Management Plan is a supplement to the resource management plan for Pinewood Reservoir as delineated in the *Resource Management Plan for Horsetooth Reservoir, Carter Lake, Flatiron Reservoir, and Pinewood Lake* (EDAW 1995). The buffer will serve to preserve the wildlife habitat and scenic values of the area and provide additional passive recreational opportunities to users of Pinewood Reservoir.

The purpose of this document is to: 1) examine the management objectives for the Ramsay-Shockey Open Space given the current ecological, social, and economic environment; 2) provide the formal program and policy guidelines that will direct the management and use of this area well into the future; and 3) develop specific implementation strategies for carrying out various components of the management effort. The overall objectives of the plan are to:

- Protect, manage, and enhance natural, geologic, cultural, and visual resources including maintaining and promoting healthy ecosystems and their processes;
- Provide and promote safe, enjoyable outdoor recreation opportunities while minimizing detrimental impacts upon natural, geologic, cultural, and visual resources;
- Provide educational opportunities regarding the values of the surrounding natural, geologic, cultural, and visual resources and the importance of responsible use and stewardship of the land;
- Define implementation policies, programs, and responsibilities for the above goals as well as provide specific implementation steps where appropriate.

1.2 History

This 177-acre property was acquired in 1997 by the Larimer County Open Lands Program as an addition to the Pinewood Reservoir Regional Park. The purpose of the purchase was to provide a

scenic and wildlife buffer and additional passive recreational opportunities to the existing Pinewood Reservoir. As part of the Colorado-Big Thompson Project, the reservoir is currently owned by the U. S. Bureau of Reclamation and operated for the dual purpose of water storage and hydroelectric power production. Recreational use of the reservoir is managed by the Larimer County Parks and Open Lands Department. In 1995, the Department completed a resource management plan that prescribed, among other things, selective acquisition of “additional lands to preserve important resource values and buffer the park from intrusive development” (EDAW 1995). A portion of the Ramsay-Shockey Open Space was specifically identified in the *Resource Management Plan for Horsetooth Reservoir, Carter Lake, Flatiron Reservoir, and Pinewood Lake* (EDAW 1995) for acquisition on a willing seller basis. In 1997, the opportunity arose and the County purchased the property using money available through the Help Preserve Open Spaces Sales Tax.

Prior to acquisition, historic uses of the property included grazing and some logging. The land is undeveloped and has been left in its natural state.

1.3 Scope and Organization of the Plan

The *Resource Management Plan for the Ramsay-Shockey Open Space* contains three major sections: 1) a review of existing conditions, including natural, cultural, and socioeconomic resources; 2) a discussion of opportunities, constraints, and planning issues related to the management of the land; and 3) a management plan addressing existing conditions, opportunities, constraints, and planning issues. In some places in this plan, existing conditions and issues surrounding Pinewood Reservoir Regional Park are discussed as well as shown on the maps since the Ramsay-Shockey Open Space was purchased as an addition to the regional park. The use and management of the Ramsay-Shockey Open Space and the Regional Park will be seamless.

1.4 Public and Agency Involvement

Public and agency involvement was utilized to ensure full representation of those parties interested in the Ramsay-Shockey Open Space.

Two public workshops and a small group meeting were conducted to provide for public input. The first workshop introduced the management plan process, reviewed existing conditions of the area, and identified the public’s hopes and concerns surrounding the future use of the area. Following this initial public meeting, a small group of neighborhood residents met with the Larimer County Parks and Open Lands Department staff to further discuss issues brought forth at the meeting and develop management solutions. Issues and management solutions discussed at this small group meeting are in Appendix A. The second workshop presented the draft management plan to the public.

In addition to public workshops, technical expertise and user interests were solicited from the following individuals, agencies and staff:

<i>Name</i>	<i>Affiliation</i>	<i>Expertise</i>
Bill Butler	National Park Service and Bureau of Reclamation	Cultural Anthropologist
Jim Dunlap	Spring Creek Velo Club	Mountain biking enthusiast
Victor Grizzle	Bureau of Reclamation	Resource/Environmental Specialist
Steve Kettler	Colorado Natural Heritage Program	Ecology/Plant and Natural Communities
Danny Merme	Northern Colorado Volunteer Mounted Patrol	Horseback Riding Enthusiast
Charlene Haeger	Colorado Division of Wildlife	Wildlife Biology
Greg Sheets	Trout Unlimited	Fishing Enthusiast
Ed Seely	Colorado Mountain Club	Hiking Enthusiast
Daryl Burkhard	Larimer County Parks and Open Lands	Open Lands Resource Specialist/Natural Resources
K-Lynn Cameron	Larimer County Parks and Open Lands	Open Lands Manager/Outdoor Recreation and Planning
Mark Caughlan	Larimer County Parks and Open Lands	Public Health and Safety/Wildlife Biology
Meegan Flenniken	Larimer County Parks and Open Lands	Open Lands Resource Specialist/Natural Resources/Project Coordinator
Mike Fleming	Larimer County Parks and Open Lands	Public Health and Safety/Outdoor Recreation/Forest Management
Martha Graf	Larimer County Parks and Open Lands	Land Use Management and Planning/Consultant
John MacFarlane	Larimer County Parks and Open Lands	Park Ranger and Volunteer Program Manager/Water Resources and Outdoor Recreation
Tony Simons	Larimer County Wildfire Safety Coordinator	Wildfire Safety
Ken Woods	Larimer County Parks and Open Lands	Facilities, Properties, and Construction Manager

2. EXISTING CONDITIONS

2.1 Overview

The Ramsay-Shockey Open Space is located immediately west of Pinewood Reservoir (Map 1). It consists of 177 acres of predominantly ponderosa pine and mixed shrubland on moderately steep slopes with rocky, shallow soils and interesting rock outcrops. With the exception of two service roads, the land is currently in a natural state, with little interruption of the natural ecological processes. The property provides habitat and movement routes for a myriad of wildlife commonly found in the area. The property is easily accessible on foot from Rattlesnake Dam at the north end of Pinewood Reservoir, a popular recreation area.

2.2 Natural Resources

a. Climate

The Ramsay-Shockey Open Space is located along the eastern slope of the northern Front Range and has a highly variable climate that is prone to sudden change. In general, the climate can be characterized as semi-arid with a strong seasonal variation in temperatures, abundant sunshine and relatively low precipitation. Unless stated otherwise, the data presented below were recorded at Estes Park, which is approximately 300 to 900 feet higher in elevation. The data, however, are generally reflective of conditions at Ramsay-Shockey Open Space.

The average maximum daily temperature is approximately 70 degrees (F) or above during five months of the year (May through September), with the daily average maximum reaching approximately 78.3 degrees in July and August. High temperatures occasionally exceed 100 degrees, but nights are generally cool, with an average low during the summer months in the mid-40's. The average frost-free period at the regional park is 118 days, extending from May 22 to September 16. Winters are generally cold but are characterized by substantial swings in temperature. January is the coldest month with an average daily maximum of 38.7 degrees and an average daily minimum of 17.0 degrees. However, high temperatures in the 50's are not uncommon even in the winter months, which encourages trail use, picnicking, fishing, and other outdoor activities on a year round basis.

Average annual precipitation is 14.15 inches, with the highest amount occurring mostly between May and August. Average annual snowfall is approximately 50 inches. Snow stays on the ground for only several days at a time, especially on south facing slopes, but can persist on forested north and east facing slopes.

Prevailing winds are from the north-northwest during the winter months and from the south-southeast in the summer. Late winter and early spring are usually the period of strongest winds and velocities in

excess of 100 miles per hour have been recorded. Strong winds resulting from thunderstorms are also fairly common in summer and wind direction associated with these storms is often from the north-northwest. Wind direction, however, can be highly variable. (EDAW 1993).

b. Topography

Elevation ranges from approximately 6,460 feet in the extreme northeast at County Road 18E, to 7,140 feet in the west. The western part of the site consists of a gentle ridge trending north-south with moderately steep north facing slopes. For the most part, the remaining land slopes gently downward to the east and northeast toward Pinewood Reservoir, except where the seasonal drainages have created narrow valleys and ravines with steep to moderately steep sides.

c. Geology and Soils

The Ramsay-Shockey Open Space is located in the foothills of the Front Range in central Larimer County. The majority of the site, with the exception of the extreme northwestern edge, contains soils from the Haploborolls-Rock outcrop complex with steep and very steep slopes. These soils are characterized as stony and cobbly with a significant portion of the area containing rock outcrops. The surface and subsurface soil layers consist of loam or sandy loam intermingled with stones and cobbles. Outcrops are typically boulders of granite, gneiss, and schist. Runoff is rapid and water erosion is severe. These soils are suited to a limited amount of grazing and to sustaining wildlife habitat (USDA SCS 1980).

The northwestern portion of the site, which includes a steep west-northwest facing slope, consists of the Wetmore-Boyle-Rock outcrop complex. These soils are shallow and well-drained with surface and subsurface layers consisting of sandy loam and underlain by granite bedrock. Runoff is rapid on these soils and they are highly erosive. This area is suited to woodland or native grasses, recreation, as sites for summer homes, and for wildlife habitat (USDA SCS 1980).

d. Hydrology

Two intermittent stream drainages flow to the east-northeast and run only during snowmelt in winter and early spring, and during and after rainfall. There are areas along these streambeds that pool water for longer periods, thus attracting a variety of wildlife.

The site is adjacent to Pinewood Reservoir to the east. This reservoir, a part of the Colorado-Big Thompson project, receives water from Lake Estes near Estes Park through the Pole Hill Power Plant and releases it to Flatiron Reservoir via underground tunnels and aboveground pipelines. The inlet tunnel (Rattlesnake Tunnel) to Pinewood Reservoir runs under the Ramsay-Shockey Open Space.

e. **Vegetation**

The Ramsay-Shockey Open Space lies in a transition from the foothills, or shrubland zone to the montane, or ponderosa pine/Douglas-fir zone (Carter 1988). The vegetation types on the site are characterized as a ponderosa pine and mixed shrubland community on moderately steep slopes with rocky, shallow soils and rock outcrops. Major vegetation types present within Ramsay-Shockey Open Space property include closed ponderosa pine forests, open ponderosa pine forests, and mountain mahogany shrublands (Map 2). The types found on the adjacent Pinewood Reservoir Regional Park include open grassland, grassland with patches of ponderosa pine, wetlands, and riparian areas. In general, the Ramsay-Shockey Open Space is a mosaic of the ponderosa pine woodlands and shrublands. Most of the trees in the area appear to have become established post-settlement, probably because of fire suppression. The ponderosa pine has expanded into the shrubland and grassland habitats and will likely continue to do so in the absence of fire or some other human or natural management action.

Closed ponderosa pine forest. The closed ponderosa pine (*Pinus ponderosa*) forests are characterized by dense stands of trees with a nearly closed canopy. The understory consists of small amounts of mountain mahogany (*Cercocarpus montanus*) and a variety of forbs, which include elk sedge (*Carex geyeri*) and King's spikefescue (*Leucopoa kingii*). These woodlands generally occur on the higher elevations of the north facing slopes.

Open ponderosa pine forest. The open ponderosa pine forest has a much more open, savanna feel to it, since the trees are more regularly spaced and the canopy rarely closed. Mountain mahogany is the dominant shrub species, but the understory includes other shrubs such as skunkbush (*Rhus trilobata*), squaw currant (*Ribes cereum*) and Spanish bayonet (*Yucca glauca*). One sub-shrub species commonly found in this landscape is broom snakeweed (*Gutierrezia sarothrae*). Forb species that occur in this vegetation type include fringed sage (*Artemisia frigida*), gayfeather (*Liatris punctata*), prairie sage (*Artemisia ludoviciana*), prairie coneflower (*Ratibida columnifera*), pussytoes (*Antennaria parviflora*), and blanket flower (*Gaillardia aristata*). Dominant grass species found in association with this vegetation type include blue grama (*Bouteloua gracilis*), needle-and-thread (*Stipa comata*), and prairie junegrass (*Koeleria pyramidata*) (EDAW 1995).

Mountain mahogany shrubland. The shrubland type occurs on the more exposed east and south facing shoulders of the site. They are characterized by continuous stands of mountain mahogany punctuated with occasional ponderosa pine and Rocky Mountain juniper (*Juniperus scopulorum*). The forb and grass species found here are similar to those associated with the open ponderosa pine forests. While this vegetation type is not uncommon along the Front Range, its presence is decreasing due to a variety of factors including development, fire suppression, invasion of weeds, and expansion of ponderosa pine.

Open grassland. The open grasslands are found around the southern end of Pinewood Reservoir on gentle slopes. While this vegetation type is dominated by herbaceous species, occasional forb and shrub species might also be found. Dominant herbaceous species include needle-and-thread, blue grama, prairie junegrass, red three-awn (*Aristida longiseta*), and western wheatgrass (*Agropyron*

smithii). Common forb species include fringed sage, wild flax (*Linum lewisii*), milk vetch (*Astragalus* sp.), golden hairy aster (*Heterotheca villosa*), and slender-flowered scurfpea (*Psoralea tenuiflora*) (EDAW 1995).

Grassland with patches of ponderosa pine. This vegetation type is located on the north end of the reservoir below the dam. This is an area with significant topographic undulations. Grasses predominate, with patches of pine located mostly on the tops of the higher hills. The species found throughout are a combination of those found in the open grassland and ponderosa pine.

Riparian. A riparian area occurs along the outflow from the dam. The vegetation occurs in a narrow band, approximately 8 to 25 feet wide, along the stream. The upper reach includes mostly herbaceous and forb species, while the lower reaches include shrubs. Common forb species that occur in this vegetation type include field horsetail (*Equisetum arvense*), curly dock (*Rumex crispus*), and watercress (*Nasturtium officinale*). The dominant sedge, grass, and rush species that occur in these riparian areas include galingale (*Cyperus* sp.), Baltic rush (*Juncus balticus*), sedge (*Carex* sp.), and bentgrass (*Agrostis* sp.) (EDAW 1995).

Wetland. One wetland occurs on the south end of the reservoir immediately adjacent to the shore. It is positioned in a valley bottom at the mouth of an intermittent drainage and is dominated by herbaceous species. Some of those species include galingale, baltic rush, sedge, bentgrass, alkali bulrush (*Scirpus paludosus*), and foxtail barley (*Hordeum jubatum*). Forb species found here include field horsetail, curly dock, anemone (*Anemone* sp.), and buttercup (*Ranunculus* sp.) (EDAW 1995).

Exotic Plants and Noxious Weeds. Some exotic plants and noxious weeds have become established on the Ramsay-Shockey Open Space property. Canada thistle, musk thistle (*Carduus nutans*), and mule ear mullein (*Verbascum thapsus*) have become established in disturbed areas. A few pockets of Canada thistle were found near the road on the northeast property line. Larimer County actively monitors and controls both of the thistles. Other known exotics in the park preserve include the ubiquitous cheatgrass (*Bromus tectorum*) and several other bromes (*B. japonicus*, *B. inermis*). Canada bluegrass and several wheatgrasses may also be found.

There is no evidence of active mountain pine beetle infestation or dwarf mistletoe anywhere on the property, although mistletoe was observed in some trees on an adjacent property.

Fire Hazard. The Ramsay-Shockey Open Space is located in a fire prone and fire driven ecosystem. With the advent of fire suppression and the lack of grazing, a range of fuels are present that pose the potential for wildfire that could effect both the site and adjacent private and public property.

Based upon Wildfire Hazard Area Maps (WHAM) provided by the Colorado State Forest Service, most of the site including its east and south facing slopes is rated as a low fire hazard. Low fire hazard is characterized as a slow to fast spreading fire, at a rate of 1-40 acres per hour, with flames rarely higher than five feet. The remainder of the site, approximately one-eighth located on the most westerly portion

on the north and west facing slopes, is rated as severe hazard with flare-ups frequently higher than tree tops and able to spread at rates of up to several hundred acres per hour.

f. Wildlife

The Ramsay-Shockey Open Space is adjacent to the 250-acre Pinewood Reservoir and Regional Park which serves as a watering area and provides wildlife habitat for a variety of species. Additionally, Pinewood Reservoir serves as a transition area around the reservoir and provides good habitat for both resident and non-resident wildlife species.

A diverse mammal population can be observed within the property boundaries. Large vertebrate species which inhabit the property include elk (*Cervus canadensis*), mule deer (*Odocoileus hemionus*), black bear (*Ursus americanus*), mountain lion (*Felis concolor*), and coyote (*Canis latrans*). This property falls within a larger area encompassing Rattlesnake Park designated by the Colorado Division of Wildlife as “severe winter range” for elk (in periods of high snow pack these areas become critical for elk survival). Mule deer are abundant and provide the primary prey base for mountain lions in this area. Black bears are occasionally observed on the property. Other mammals observed within the property include red fox (*Vulpes fulva*), raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), bobcat (*Lynx rufus*), porcupine (*Erethrin dorsatum*), mountain cottontail rabbit (*Sylvilagus nuttalli*), Abert’s squirrel (*Sciurus aberti*), least chipmunk (*Eutamias minimus*), and deer mouse (*Peromyscus maniculatus*).

The primary migratory flyway along the Front Range intersects the project area and, along with Pinewood Reservoir, the area provides habitat for resident bird populations and a resting place for migratory birds. A large variety of resident and migratory avian species can be observed in and around the property such as wild turkey (*Meleagris gallopavo*), bald eagle (*Haliaeetus leucocephalus*), golden eagle (*Aquila chrysaetos*), red-tailed hawk (*Buteo jamaicensis*), peregrine falcon (*Falco peregrinus*), American kestrel (*Falco sparverius*), turkey vulture (*Cathartes aura*), Canada goose (*Branta canadensis*), western grebe (*Aechmophorus occidentalis*), common goldeneye (*Bucephala clangula*), northern flicker (*Colaptes auratus*), Steller’s jay (*Cyanocitta stelleri*), mountain bluebird (*Sialia currucoides*), and the common raven (*Corvus corax*). Wildlife habitat around the reservoir is used by migratory waterfowl as well during certain seasons.

A few species of reptiles have been observed on the property, which include the prairie rattlesnake (*Crotalus viridis viridis*), green racer, and the western terrestrial garter snake (*Thamnopsis elegans*).

The property serves as an important ecological buffer to Pinewood Reservoir by providing an undisrupted movement corridor for wildlife requiring access to the reservoir water and habitat. The private property to the southwest also serves as an elk wintering ground and calving area. Thus, the Ramsay-Shockey Open Space not only buffers Pinewood Reservoir but also buffers critical wildlife habitat and provides an important linkage between the habitat and the reservoir.

2.3 Visual Resources

The Ramsay-Shockey Open Space property is highly visible from many points within Rattlesnake Park (the historic name for the surrounding valley) due to its location. The land can be seen from County Road 18E, from homes in the area (especially those located on the slopes on the southeast end of the reservoir), and from the public use areas surrounding the reservoir. The view is of gentle to steeply sloping hillsides and ravines, with a variety of trees, grasses, and shrubs, which create a mosaic of color and texture that changes with the light and the seasons. The easterly-trending ridgelines are marked by large, prominent and rugged rock outcrops that add to the visual interest of the landscape. From the site, viewers can enjoy longer range vistas of Rattlesnake Park, Blue Mountain, and Bald Mountain.

2.4 Cultural Resources

Two cultural resource surveys have been conducted in the area in recent years, although neither survey included the Ramsay-Shockey Open Space. An intensive cultural resource survey of approximately one-acre of land below the dam was performed in the summer of 1990 (Andrews 1990). No cultural resources were recorded during this inventory. A survey around Pinewood Reservoir in 1993 located four sites and four isolated finds. Of those, one archeological site is eligible for the National Register. The Colorado Historical Society's records indicate that there may be an unconfirmed site on the State Land Board section (36) to the immediate south of the Ramsay-Shockey Open Space site. There are no known sites on the Ramsay-Shockey Open Space property. Again, however, this property has not been surveyed. Given the proximity of known sites in the area where surveys have been conducted, it is possible that the Ramsay-Shockey Open Space may contain some sites of cultural significance.

2.5 Socioeconomic Resources

a. Ramsay-Shockey Open Space Land Status

The Larimer County Open Lands Program acquired the 177-acre Ramsay-Shockey Open Space property in 1997. The land is undeveloped except for two service roads that loop through the property. While currently there is no public access to the property, there are plans for public access. There are easements and right-of-ways on the property for water conveyance via the Colorado-Big Thompson Project (the existing underground Rattlesnake Tunnel), as well as an access easement for the landowner directly to the north through the Ramsay-Shockey Open Space via the service road from CR 18E.

b. Adjacent Land Use

The Ramsay-Shockey Open Space adjoins Bureau of Reclamation-owned Pinewood Reservoir to the east and south. Pinewood Reservoir is a part of the Colorado-Big Thompson Project and provides water storage and hydroelectric power generation. The reservoir is also a popular Larimer County regional park and is managed by the Larimer County Parks and Open Lands Department. Visitors to

this park enjoy passive recreational activities such as fishing, camping in designated areas, picnicking, and wakeless boating. Map 1 shows the designated use areas around the reservoir. A parking lot with a fee box and information board is located at the north end of the reservoir, and provides an access point to Fisherman's Cove, a day use area across the dam. A footpath has been created from Fisherman's Cove along the west side of the reservoir by fishermen desiring access to that portion of the reservoir. At the south end, the Blue Mountain Area offers camping and picnicking opportunities.

State Land Board property (section 36) abuts the entire southern boundary of the Ramsay-Shockey Open Space (Map 1). This land is undeveloped and leased for grazing. In 1998, after a nomination and review process, this property was selected by the State Land Board Commissioners to be placed in the State Land Board Stewardship Trust. While in the Trust, the property will remain under its current management practices. Inclusion in the Trust offers a moderate level of protection against the threat of immediate development, as well as the potential for permanent protection as open land in the future.

Private property immediately to the north, west, east, and southeast contain rural residential developments that vary in density. Generally, the land to the north, west, and south have homes built on 35 acres or more. A county subdivision, Green Mountain Estates, covers much of the hillside east of the reservoir. County Road 18E delineates the extreme northeastern boundary; land across this road is private.

In February 1999, the Larimer County Open Lands Program purchased a conservation easement on 4,100 acres of land south of the reservoir. Known as the Blue Mountain Bison Ranch, the conservation easement precludes future development and specifies continuation of ranching and maintenance of wildlife habitat.

c. Access, Circulation and Traffic

Pinewood Reservoir is located approximately 12 miles west of Loveland via US Highway 34 or other local roads and eventually County Road 18E, which is a two lane paved road. The Ramsay-Shockey Open Space property is not adjacent to the road, but access by vehicle can be gained along two service roads off of County Road 18E (Map 1). The service road to the north is owned by Larimer County. The homeowner to the north of the Ramsay-Shockey Open Space currently uses this road to access his/her property. A separate landowner of 80 acres to the west of the property has been accessing his/her property via this road. This access, however, is not legal and will not be continued. A gate has been installed at County Road 18E to preclude unauthorized use of the service road.

The service road below the dam is the Bureau of Reclamation access to Rattlesnake Dam. This road also connects to the other service road that continues up the ridge west of the dam and into the Ramsay-Shockey Open Space.

Currently, a parking area with a fee box, signage with rules and a park map exists at the east end of the dam. The parking area currently provides space for approximately 12 vehicles. A bridge and foot trail over the dam provide access to Fisherman's Cove, where there are picnic tables and a restroom facility.

In 1990, Larimer County received approval from the Bureau of Reclamation to construct a trailhead below the dam that would include a 12 vehicle capacity parking lot off of CR 18E (letter, July 30, 1990).

d. Public Facilities, Utilities and Services

Fire protection. Fire protection is the responsibility of the Larimer County Sheriff's Department and the Loveland Fire Protection District.

Public safety. While the Larimer County Sheriff's Department is ultimately responsible for law enforcement, the Park Rangers and Volunteer Program staff are responsible for the education and enforcement of park regulations and assist the Sheriff's Department and other law enforcement agencies in responding to and preventing criminal activity in the parks and open space. The Park Rangers and Volunteer Program staff also provide visitor assistance and emergency and medical needs. The Thompson Valley ambulance service responds to more serious medical emergencies while rescue and searches are conducted by the Larimer County Search and Rescue team of the Sheriff's Department. The helicopter landing site for emergency access is on Rattlesnake Dam.

e. Recreational Use and Demand

There are currently no recreational facilities on the Ramsay-Shockey Open Space. Recreational use of Pinewood Reservoir Regional Park has been documented through surveys and observation and noted in the 1995 Resource Management Plan. In a 1991 survey, respondents ranked Pinewood Reservoir as their fourth favorite Larimer County park (EDAW 1995). As the population of the County and the northern Front Range continues to increase, so too will use of this park. It is expected that the Ramsay-Shockey Open Space will also receive recreational use.

f. Operations Budget and Funding

As a future component of the Pinewood Reservoir Regional Park, operation for the Ramsay-Shockey Open Space will be funded through several sources including Colorado State Lottery funds, user fees, and other miscellaneous sources with most of the operating fund deriving from user fees. In addition, operations for the Ramsay-Shockey Open Space will be supported through Larimer County Help Preserve Open Spaces Sales Tax funds. In accordance with the sales tax initiative language, 15% of open space tax revenues are set aside for long-term management costs of acquired properties. In addition, the development of facilities for the Ramsay-Shockey Open Space will be funded through a donation by Mr. Ramsay.

3. OPPORTUNITIES, CONSTRAINTS, AND PLANNING ISSUES

3.1 Overview

During the management plan development process, input was received from Parks and Open Lands staff, technical advisors, agencies, individuals, and the general public regarding opportunities, constraints, and planning issues that individuals had with the current existing conditions and future management of the property. These issues are divided into three key components: 1) natural resources, 2) outdoor recreation, and 3) environmental education.

3.2 Natural Resource Opportunities, Constraints, and Planning Issues

- *Protect, manage, and enhance natural, cultural, and visual resources including maintaining and promoting healthy ecosystems and their processes.*

Natural resource opportunities associated with the property include:

- Protecting the Ramsay-Shockey Open Space from 35-acre development which will preserve a buffer around Pinewood Reservoir and maintain a movement corridor for wildlife using the reservoir.
- Managing the area for forest health which will reduce the fire risk to Pinewood Reservoir and surrounding landowners.
- Protecting the viewshed to the west of Pinewood Reservoir.

Constraints and planning issues associated with natural resources identified on the property are:

- Fire hazard may increase if fuels are not managed.
- Invasion of noxious weeds could threaten the health of plant and animal life.
- Some plants and animals may be disturbed by some recreational uses if not planned properly.
- An in-depth cultural survey has not been conducted on this property.
- Deer and elk populations may need to be managed for health or safety reasons.
- Additional buffers to the area may be desirable to ensure an unimpeded movement corridor for wildlife.
- Wetlands and cultural sites are sensitive and the appropriate placement of the trails is critical so as not to disturb them.

3.3 Outdoor Recreation Opportunities, Constraints, and Planning Issues

- *Provide and promote safe, enjoyable outdoor recreation opportunities while minimizing detrimental impacts upon natural, cultural, and visual resources.*

Outdoor recreation opportunities associated with the property include:

- Developing a short loop trail on the Ramsay-Shockey Open Space with a connection to a larger loop trail circling the reservoir.
- Expanding recreational opportunities at Pinewood Reservoir by developing a trail to accommodate hiking, biking, and horseback riding activities.

Constraints and planning issues associated with outdoor recreational use of the property are:

- Anglers in the Fisherman’s Cove area or along the southern bank of the reservoir, may be disturbed by trail users if the trail is not appropriately placed.
- Increased trespassing on adjacent private property may occur.
- Wildlife/user conflicts may arise particularly with regard to mountain lions, bears, and rattlesnakes.
- Trailhead accommodations need to be considered, including location, parking, signage, and fee box.
- The area at the inlet of the Rattlesnake Tunnel at Fisherman’s Cove is hazardous, with social trails located on the side of a slope that falls steeply toward the deep waters at the mouth of the tunnel.
- Parking below the dam, at a previously approved Bureau of Reclamation site, might be dangerous when driving down the hill in winter conditions.
- Recreational use may cause increased traffic near homeowners.
- Increased recreational use of the area may increase wildfire risk due to negligence or carelessness, therefore, an effective fire management plan is critical.

3.4 Environmental Education Issues and Concerns

- *Provide educational opportunities regarding the values of the surrounding natural, cultural, and visual resources and the importance of responsible use and stewardship of the land.*

Environmental education opportunities associated with the property include:

- Providing information regarding mountain lion, bear, rattlesnake, elk, and other wildlife behavior to minimize wildlife/user conflicts.
- Developing a kiosk or trailhead signage depicting information on the Colorado-Big Thompson Water Project.
- Engaging volunteer assistance in trail building.
- Developing interpretive signage for wetlands, archeological sites, etc.

Constraints and planning issues associated with environmental education are:

- Development of interpretive signage and a kiosk may lead to vandalism.

4. MANAGEMENT PLAN

4.1 Overview

To meet the purpose and objectives of the Ramsay-Shockey Open Space management plan and to address the opportunities, constraints, and planning issues brought forth by the public and staff, the plan is divided into three main components: 1) natural resource management; 2) outdoor recreation management; and 3) education opportunities. These three components, while addressed separately, are interrelated and will impact and influence the other components.

The Ramsay-Shockey Open Space property is connected to Pinewood Reservoir, a Larimer County managed regional park, and therefore, the management of certain aspects of the Ramsay-Shockey Open Space will apply to Pinewood Reservoir as well.

Overall Vision

The Ramsay-Shockey Open Space, adjacent to Pinewood Reservoir, was purchased in 1997 with the intent to protect the natural resource values of the property, to provide a buffer to Pinewood Reservoir, and to allow for expanded recreational activities. Pinewood Reservoir, a Larimer County Regional Park, is a popular area for fishing, camping, and picnicking. Additionally, the Reservoir is an important link in the Colorado-Big Thompson Project, and therefore, has an interesting cultural history.

The proposed vision for the Ramsay-Shockey Open Space is for the creation of a multi-use trail that would allow access for such activities as hiking, mountain biking, and horseback riding. The proposed trail design focuses on recreational access, preservation of wildlife habitat, and protecting scenic vistas for the public to enjoy. Visitors and the local community can enjoy the beauty of this forest and grassland in a natural setting. The close proximity of the site to the City of Loveland allows for convenient recreation opportunities with safe, easy access.

Educational opportunities will allow visitors to learn about the native flora, fauna, and history of the Colorado-Big Thompson Water Project. Additionally, visitors can learn how they can protect this valuable natural resource by participating in programs such as nature hikes and trail maintenance and construction.

4.2 Natural Resource Management

Natural resource management addresses the health and dynamics of the plant and animal communities, and the preservation of natural features (i.e., rock outcrops and scenic vistas) and cultural resources found on the Ramsay-Shockey Open Space. For purposes of this plan, natural resources management

is grouped into several categories: a) forest management; b) grassland and shrubland management; c) noxious weed management; d) wildlife management; and e) cultural resource site management.

a. Forest management

Forest management is an important component in maintaining the scenic quality and wildlife habitat on the Ramsay-Shockey Open Space property. Different types, quantities, and qualities of vegetation species will determine what birds and mammals use the property and the attractiveness of the land from a visual perspective. Forest health also influences the level of wildfire hazard. Due to the type, density, and age of fuels present on the property, most of the property is classified as a low wildfire hazard while the steep slopes of the northwest corner of the property are classified as a severe wildfire hazard. Fuel reduction and vegetation management are the most effective means for reducing wildfire threat to adjacent landowners and on-site facilities.

A specific management plan that incorporates forest health and wildfire management can guide managers toward the creation of a place that is safe, healthy, and attractive. Such a plan could recommend such silviculture techniques as logging, grazing, or prescribed burning to reduce wildfire hazards. However, prior to development of a plan, a baseline study needs to be created to develop appropriate management strategies.

Implementation steps

- Develop a forest baseline inventory plan in conjunction with the Colorado State Forest Service and obtain inventory data through the use of park staff, volunteers, students, etc.
- Develop a Forest Health and Fire Hazard Mitigation Plan utilizing staff and Colorado State Forest Service expertise.
- Work with various contractors, volunteer groups, and staff in implementing the management steps outlined in the Forest Health and Fire Mitigation Plan.
- Monitor forest health and fire risk on an ongoing basis as outlined in the Forest Health and Fire Hazard Mitigation Plan.
- Work with the Forest Service to install a sign that indicates the level of fire danger in the Pinewood area.

b. Grassland and shrubland health and management.

Equally important to maintaining forest health is the management of grassland and shrubland community health. The specific natural processes that these communities evolved under, whether fire, grazing, or soil and moisture regimes, are not clearly known. Over time, these grasslands and shrublands have been invaded by non-native grass and forb species that are difficult to manage. In addition to the presence of these non-native plant species in the grasslands and shrublands, a slight fuel build-up has occurred as a result of the absence of fire, logging, and grazing in recent decades. The majority of the Ramsay-Shockey Open Space grasslands and shrublands are classified as having a low fire hazard based upon Wildfire Hazard Area Maps (WHAM) provided by the Colorado State Forest Service.

To address these issues, a Grassland and Shrubland Management Plan is proposed that will identify practical management tools for reducing the impact of invasive exotics and the fuel load in the grasslands and shrublands. Potential management tools may include the use of grazing or controlled burns, among others, to reduce the fire hazard in these communities as well as to maintain community health. This management plan will coordinate with the Forest Health and Fire Hazard Mitigation Plan. Additionally, following a future inventory of butterfly species on the property, management of any butterfly habitat would also be addressed in the Grassland and Shrubland Management Plan.

Implementation steps:

- Develop a site specific Grassland and Shrubland Management Plan utilizing information researched and generated in the *Management Alternatives for Natural Communities and Imperiled Invertebrates at Horsetooth Mountain Park*.
- Engage staff and volunteer groups in implementing the management steps outlined in the Grassland and Shrubland Management Plan.
- Engage staff and volunteer groups to monitor grassland and shrubland health on an ongoing basis as outlined in the Grassland and Shrubland Management Plan.

c. Noxious weed management.

A few pockets of Canada thistle (*Cirsium arvense*) and musk thistle (*Carduus nutans*) have been identified on the Ramsay-Shockey Open Space. Both species are considered noxious weeds by the Colorado Department of Agriculture and Larimer County. Other non-native species include three bromes, *Bromus tectorum*, *B. inermis*, and *B. japonicus*, as well as mule ear mullein (*Verbascum thapsus*). These weeds may occur in forested lands as well as grasslands and shrublands. While these species do not currently present an overwhelming problem, if left unchecked they may potentially spread. An inventory for noxious and non-native weeds will be conducted in order to develop a strategy for control and reclamation.

Implementation steps:

- Inventory and map noxious and non-native weed species.
- Develop an Integrated Pest Management (IPM) Plan for noxious weed control and restoration.
- Implement the IPM Plan.
- Monitor the success of the IPM Plan including a weed inventory every two to three years.

d. Wildlife management.

The wildlife habitat in and around the Ramsay-Shockey Open Space is in good condition. There are no immediate habitat improvements needed at this time. The main wildlife management objective should emphasize preservation of the existing conditions and community health. Any improvements to the property, such as trails, fencing, facilities, etc., should be low impact and planned so as to avoid disturbing sensitive wildlife habitat areas.

There are several wildlife species that currently inhabit the property of which additional information would be useful in future wildlife management decisions. Efforts to study and monitor these species should be encouraged to begin to build a scientific baseline of information. For aid in future management decisions, there is a need for a more comprehensive wildlife inventory of the property. Wildlife species numbers, movement corridors, and times of year present on the site should also be included. The Pinewood area, having similar habitat to Horsetooth Mountain Park which is host to several rare butterfly species, has not been inventoried for rare butterflies. Therefore, a future inventory of butterfly species on the Ramsay-Shockey Open Space would be important.

Implementation steps:

- Engage staff and volunteers to identify and monitor wildlife populations and key wildlife habitat (i.e., snags, outcrops, etc.), and determine steps to be taken, if necessary, to prevent human disturbance.
- Encourage research of existing wildlife populations including academic studies by Colorado State University.
- Conduct a butterfly species inventory.

e. Cultural resource site management

An in-depth inventory of the cultural resources of the Ramsay-Shockey Open Space has not been completed at this time. However, an archaeologist determined that the proposed trail location would not impact any potential cultural sites. Given the proximity of known archeological sites along the shores of Pinewood Reservoir, an in-depth cultural survey of the Ramsay-Shockey Open Space is desirable.

Implementation steps:

- Conduct a cultural survey of the Ramsay-Shockey Open Space.

4.3 Outdoor Recreation Management

Outdoor recreation management is addressed by examining three different categories: a) multiple use and user interactions; b) trail construction and maintenance; and c) parking, picnic, and other facilities maintenance.

a. Multiple use and user interaction.

A variety of non-motorized recreational activities will be allowed at the Ramsay-Shockey Open Space including hiking, horseback riding, and mountain biking. With an array of uses there is the potential for user conflicts to arise. Potential conflicts may include horse manure on the trails which poses a health and safety issue, the speed at which bikers ride on the trail, and the potential for trail closures in inclement weather.

Implementation steps:

- Ensure that the trail is designed to accommodate a variety of recreational uses.
- Encourage respect of other users to reduce multiple use conflicts through signage that promotes trail etiquette.
- Plan the trail so segments are not visible from each other.
- Incorporate the Ramsay-Shockey Open Space in the regular park ranger public activities, education, and enforcement schedule.

b. Trail maintenance and construction.

A 2.5-mile natural surface trail will be constructed that originates at the parking lot on the east side of Rattlesnake Dam and heads westward towards the restroom facility. From there, the trail will head uphill to the west, south across the upper portion of the property, and then east to reconnect with the Pinewood Reservoir trail (Map 3). Per the *Resource Management Plan for Horsetooth Reservoir, Carter Lake, Flatiron Reservoir and Pinewood Lake (1995)*, the trail will be continued around the reservoir to the Blue Mountain Campground Area, making the total trail length including the Ramsay-Shockey Open Space, approximately 4 miles. The trail will be designed to minimize natural resource impacts, provide for a variety of non-motorized recreational uses, and allow for enjoyment of scenic vistas. The trail will be open for day-use only, with the exception of a ranger or volunteer-led hike. Ongoing maintenance provided by the Larimer County trail crew and volunteers will be necessary to keep the trail safe and in good condition.

Implementation steps:

- Map scenic vistas and natural features in order to aid in trail alignment.
- Plan the trail so as to avoid water collection and muddiness, however in the event of muddy trails, the trail may be re-routed or seasonal trail closures considered to avoid excessive trail damage.
- Construct the new trail with staff and volunteer assistance.
- Provide ongoing trail maintenance.
- Utilize a boardwalk design for the portion of the trail through the wetlands at the southeast end of Pinewood Reservoir.
- Design and construct a scenic overlook to commemorate the Ramsay-Shockey Open Space.

c. Parking and facilities maintenance.

The existing parking area above Rattlesnake Dam will be expanded to provide parking for a total of 40 vehicles, including spaces designated for handicap parking. The expansion of this parking facility will allow for increased parking capacity for the trail and popular fishing spot, facilitate user fee collections, and reduce the amount of vehicles parking on the county road. Additionally, the new parking area design would include picnic table sites. Signage will be improved to reduce the number of vehicles passing the parking area and a U-turn area will be built below the dam to allow visitors that pass the parking area to safely turn around. Maintenance of the existing restroom and campground facilities around Pinewood Reservoir Regional Park is currently performed by the Larimer County Parks and Open Lands Department staff, and these duties would be expanded to include Pinewood Reservoir Expansion maintenance projects. Fences are currently in good condition, however maintenance of existing fences is important to control livestock entering from adjacent properties and reduce trespassing onto adjacent private lands. Fences that currently are in place between the Ramsay-Shockey Open Space and the Pinewood Reservoir Regional Park will be removed. Additionally, it would be prudent to install safety rails around the mouth of the water input tunnel in Fisherman's Cove for safety reasons.

Implementation steps:

- Design and construct the expanded parking area.
- Install picnic sites.
- Improve signage to identify the dead end road and end of park access above the dam.
- Build a U-turn area below the dam.
- Provide a dog refuse cleanup system.
- Incorporate maintenance of the Ramsay-Shockey Open Space improvements with maintenance done at Pinewood Reservoir Regional Park.
- Remove interior fences and regularly inspect exterior fences for maintenance and repairs.
- Install signage that indicates no horse-trailer parking at the expanded parking area.
- Install a gate off county road 18E at the entrance to the road accessing the house to the north to prevent trespassing. Also install a gate above the house on the access road to avoid hikers continuing down the road.
- Install a guardrail along the trail that rounds Fisherman's Cove to prevent accidental falling into the waters at the mouth of the tunnel.
- Larimer County Parks and Open Lands Department maintenance staff will continue to maintain the parking area.

4.4 Education Opportunities

Numerous opportunities exist for natural resource and environmental education at the Ramsay-Shockey Open Space including: 1) Interpretive brochures or interpretive signs for the park; 2) a trailhead marker with interpretive displays and a map of the area and trails; and 3) volunteer-led hikes that focus on the natural and cultural history of the site. Interpretive materials should emphasize human-wildlife

interactions, wetland functions and species, noxious weed species and management, and the cultural history and archaeology of the area.

Implementation steps:

- Develop an interpretive scheme
- Implement the interpretive scheme using staff and volunteers.

4.5 Summary of Implementation Steps and Phasing

A tabular summary of implementation steps and proposed timelines is provided below. These steps will be prioritized and implemented as budget and time allows.

Table 1. Summary of Implementation steps for the Ramsay-Shockey Open Space Management Plan.

Ramsay-Shockey Open Space Management Implementation Steps	Cost Estimate	1999	2000	2001 and beyond	Responsible program*
Forest health and fire hazard mitigation					
Develop a forest baseline inventory plan and Obtain forest baseline inventory data	Unknown		Winter		Colorado State Forest Service/Park Ranger and Volunteer Services
Develop a Forest Health and Fire Hazard Mitigation Plan	Unknown		Spring		Colorado State Forest Service
Implement Forest Health and Fire Hazard Mitigation Plan	Unknown		Year-round	Annual	Facilities and Park Maintenance
Monitor forest health and fire risk	Unknown		Fall-Winter	Annual	Facilities and Park Maintenance
Work with Forest Service to install a sign indicating the level of fire danger in the Pinewood area.	Unknown		Winter		Facilities and Park Maintenance
Grassland and shrubland management					
Develop a Grassland and Shrubland Mgmt Plan	Unknown		Winter		Open Lands Program
Implement Grassland and Shrubland Mgmt Plan	Unknown		Summer		Facilities and Park Maintenance
Monitor Grassland and Shrubland Mgmt Plan	Unknown		Summer	Biannual	Facilities and Park Maintenance
Noxious weed management					
Complete inventory of noxious weed infestations	Unknown	Completed			Facilities and Park Maintenance
Develop Integrated Pest Management (IPM) Plan for Noxious weeds	Unknown		Summer		Facilities and Park Maintenance
Implement the IPM Plan	\$1000.00/yr	Begun		Annual	Facilities and Park Maintenance
Monitor the IPM Plan	Unknown			Annual	Facilities and Park Maintenance
Wildlife management					
Identify and monitor the locations of wildlife Species and habitat.	Volunteer		Summer	Annual	Park Ranger and Volunteer Services
Encourage research and inventory wildlife	Unknown		Annual	Annual	Park Ranger and Volunteer Services
Inventory butterfly species	Unknown		Summer		Open Lands Program
Cultural resource site management					
Conduct a cultural resource inventory	Unknown		Winter		Open Lands Program
Multiple use and user interaction					
Promote trail etiquette through signage	\$150.00 ea.		Spring		Facilities and Park Maintenance
Plan trail so segments aren't visible from each other	\$100.00	Completed			Facilities and Park Maintenance/Open Lands

Ramsay-Shockey Open Space Management Implementation Steps	Cost Estimate	1999	2000	2001 and beyond	Responsible program*
Incorporate the Ramsay-Shockey Open Space in the regular park ranger schedule	Unknown	Completed			Park Ranger and Volunteer Services
Trail maintenance and construction					
Map scenic vistas and natural features to aid in trail alignment	\$100.00	Completed			Facilities and Park Maintenance/Open Lands Program
Plan the trail so as to avoid water collection	\$100.00	Completed			Facilities and Park Maintenance/Open Lands Program
Construct loop trail and reservoir trail	\$6.00/ft.		Winter		Facilities and Park Maintenance
Trail maintenance	\$400.00 yr.			Annual	Facilities and Park Maintenance
Utilize a boardwalk design for the portion of the trail through the wetlands	Unknown		Winter		Facilities and Park Maintenance
Design and construct a scenic overlook to Commemorate the Ramsay-Shockey Open Space	Unknown		Winter		Open Lands Program/Facilities and Park Maintenance
Parking and facilities maintenance					
Design and construct expanded parking area	Unknown		Winter		Facilities and Park Maintenance
Install picnic tables	Unknown		Spring		Facilities and Park Maintenance
Improve signage to identify the dead end road and end of park access above the dam.	\$200.00		Winter		Facilities and Park Maintenance
Build a U-turn area below the dam	Unknown		Winter		Facilities and Park Maintenance
Provide trash can and dog refuse cleanup system	\$230.00		Spring		Facilities and Park Maintenance
Remove interior fences	Unknown		Summer		Facilities and Park Maintenance
Maintain existing fences	Unknown			Annual	Facilities and Park Maintenance
Install signage that indicates no horse-trailer parking at the expanded parking area.	\$80.00		Winter		Facilities and Park Maintenance
Install a gate off county road 18E	\$300.00	Completed			Facilities and Park Maintenance
Install a guard rail around Fisherman's Cove	Unknown		Winter		Facilities and Park Maintenance
Education opportunities					
Develop an interpretive scheme	Unknown		Summer		Park Ranger and Volunteer Services
Implement the interpretive scheme	Unknown		Summer		Park Ranger and Volunteer Services
* Note that while various programs may be responsible for a particular task, the implementation of the task may involve cross-program cooperation and participation as well as the use of volunteers. All volunteer activity will be developed and organized by the Volunteer Coordinator located in the Park Rangers and Volunteer Services Program.					

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6. APPENDIX A

Ramsay-Shockey Open Space	
Issues	Management Solutions
<i>A. Trail and Open Space</i>	
1. Allow day use and hiking only on the trail.	1. The trail will be maintained as day-use only.
2. Non-motorized trail use only	2. The trail will be maintained for non-motorized use only.
3. Safety with multi-use on trails (horseback riders, mountain bikers, hikers)	3. Promote trail etiquette through clearly marked signs. Our experience with Horsetooth Mountain Park is that multi-use trails can work. We have volunteer mountain bike and horseback riding groups that patrol to promote etiquette at Horsetooth Mountain Park.
4. Hikers using the trail for overnight camping.	4. The trail will be maintained as day-use only.
5. Where will users walk on the east side of the reservoir?	5. Trail users will be encouraged to walk back along the west side of the reservoir, or will walk along the shoreline or road on the east side.
6. Effects on wildlife	6. The trail has been aligned to avoid sensitive wildlife areas following Division of Wildlife recommendations. By allowing only passive recreation at the Ramsay-Shockey Open Space, effects on wildlife will be minimized. The Blue Mountain Bison Ranch has been determined to be the most sensitive wildlife habitat in the area and Larimer County Parks and Open Land has protected the Ranch with a conservation easement.
7. Forest fire	7. No fires will be allowed on the Ramsay-Shockey Open Space and campfires at the reservoir campsites are contained in provided grates. No fires have been started by a camper or hiker in the Larimer County Parks system. All forest fires that have occurred in the vicinity of Larimer County Parks have been the result of lightening strikes. When the sheriff designates a high fire danger we post the fire danger notice. Additionally, we will maintain the forest health at the Ramsay-Shockey Open Space to keep fuel levels low. We will work with the Forest Service on a sign that indicates the level of fire danger.
8. Balance homeowner and recreational interests	8. Continue to include homeowners and recreational users in the management plan process for the Ramsay-Shockey Open Space.
9. Area is not covered by the Loveland Fire District.	9. The area is covered by the Sheriff's Emergency Services Department as well as by the Loveland Fire District for emergencies.
10. Need to continue to charge a use fee.	10. The existing user fee will be continued.
11. Will the trail be extended to the Pole Hill Trail in the future?	11. The loop trail we are proposing is only intended to be a loop trail and remain on the Ramsay-Shockey Open Space property

	and Pinewood Reservoir.
<i>B. Parking</i>	
1. Pave the road to the access road below the dam	1. Currently, the plan is to expand the existing parking area at the dam and therefore there will not be a need to pave the road below the dam. Ultimately, the location of the area will be determined by safety issues and safety mitigation capabilities. If it becomes necessary to locate the area below the dam, the County will maintain & pave the road to the parking area.
2. Signage to identify the private/dead end road	2. Signage that currently exists to identify the dead end road and end of park access above the dam will be improved.
3. Parking below the dam may impact the sledding hill.	3. A parking area is being designed above the dam for the Ramsay-Shockey Open Space. However, if it becomes necessary to locate the parking area below the dam, it will be located so as not to impact the sledding hill.
4. Size of the expanded lot.	4. The size of the expanded lot will accommodate existing park users and additional users so as to alleviate the need to park on private property or the roadside.
<i>C. Increased Traffic</i>	
1. Increased traffic: Expanded parking will increase the number of cars on the road.	1. By purchasing the 4100-acre Blue Mountain Bison Ranch and the 177-acre Ramsay-Shockey Open Space, Larimer County has eliminated nearly 1200 vehicle trips per day (based on 10 vehicle trips/household) that would have occurred were these properties to be developed as 35-acre subdivisions. A projected 60 vehicle car trips per day will occur as a result of the new open space park, and seem to be minimal when compared to the potential increased traffic were a subdivision built at these sites.
2. Horse trailers on the road	2. The expanded parking area as now designed will not accommodate horse trailers. A “no horse trailer parking” sign will be posted at this lot. However, if in the future the Pole Hill Trail becomes viable, a parking area for horse trailers will be needed.
3. The road is privately maintained and fragile, how to keep people off it	3. Signage that indicates the road beyond the parking area dead ends and provides no park access will be improved.
4. Conflicts with the school bus drop off.	4. Residents can still wait at the parking area to pick up children after school.
5. Bicyclists on the road/ the need to create a bike lane.	5. This information and request has been passed on to the Larimer County Engineering Department.
6. Road maintenance	6. Road maintenance will continue to be provided by Larimer County on the paved sections of road above the dam.
<i>D. Public Outreach</i>	
1. Better efforts to get mailings out to local residents	1. Notices were sent to residents within ¼ mile of the Ramsay-Shockey Open Space, and will continue to be sent to residents as well as meeting attendees.

2. Is it possible to have a group representative at other meetings in the process?	2. A group of residents were invited to represent the interests of area residents at small in-house meetings.
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Pinewood Reservoir	
Issues	Management Solutions
Full-time ranger on-site Trash Vandalism Noise Hunting Drug and alcohol use Trespassing Campers cutting trees for firewood	1. Park rangers patrol Carter, Flatiron and Pinewood Reservoirs based on volume of public use and dollars available. 1999 was the first year campposts were at Pinewood and will continue to be used during summer months. The Parks Department experience has been that the presence of campposts substantially decreases problems at the park.
2. a. Responsible fishing etiquette signs posted	a. Signs will be posted that emphasize responsible fishing etiquette.
b. Additional call boxes on the road	b. Request will be passed on to the Larimer County Engineering Department. The current call box location is the only place with adequate reception.
c. Drinking/washing water availability	c. There is seasonal water available at the boat launching area, Windy Pines and Blue Mountain – the trail’s end.
3. Illegal parking on private property	3. Providing additional parking by expanding the existing lot will alleviate the need to park on private property.
4. Who to call for late night problems after ranger shifts end	4. For late night problems, the Larimer County Sheriff’s Department can be contacted.
5. Cattle drinking from the reservoir	5. Fences along park boundaries were repaired the week of July 19 th , and additional fence work will be done in November, 1999. However, the area is open range as there are no cattle guards on the road and cattle can and will on occasion access the reservoir – as do elk, deer, and other wildlife.
6. Non-Larimer County residents using the area	6. The Larimer County Parks and Open Lands Department provides parks for general public use.
7. The percentage of park fees that go to maintenance, patrols, etc.	7. All park fees go directly to the Larimer County Parks and Open Lands Department for maintenance, patrols, etc.
8. Sheriff response time.	8. Sheriff’s response time is a minimum of 10 minutes.
9. Contamination of Pinewood Reservoir water supply.	9. The reservoir water supply will not be impaired by recreational users.
10. Homeowners paying for emergency services.	10. The cost of emergency response by the Loveland Rural Fire Protection District would be the same regardless of the presence of Pinewood Reservoir and the recreation area.

